

Claims:

1. An at least five-layered, biaxially oriented, shrinkable and sealable tubular film for packaging and wrapping meat, meat with bones, or pasty foodstuffs, characterized in that each of the first four layers, counted from the inside to the outside, consists of at least one polyolefin and/or modified polyolefin, and that these layers are followed by one layer or more layers based on polyvinylidene chloride copolymer and/or polyamide and/or ethylene-vinyl alcohol copolymer and/or polyolefin and/or modified polyolefin.
2. The tubular film according to claim 1, characterized in that the first layer consists of homopolymers of ethylene or propylene and/or copolymers of linear α -olefins having 2 to 8 C atoms.
3. The tubular film according to claim 2, characterized in that the polyolefins of the first layer preferably consist of linear low-density polyethylene, high-density polyethylene, polypropylene homopolymers, polypropylene block copolymers and polypropylene random copolymers.
4. The tubular film according to claim 3, characterized in that the first layer consists of at least one polyethylene produced using a metallocene catalyst.
5. The tubular film according to claim 1, characterized in that the first layer includes modified polyolefins, said modified polyolefins being copolymers of ethylene or propylene and optionally further linear α -olefins having 3 to 8 C atoms with α,β -unsaturated carboxylic acids, preferably acrylic acid, methacrylic acid and/or metal salts thereof and/or alkyl esters thereof, and/or graft copolymers of α,β -unsaturated dicarboxylic acids, preferably maleic acid, fumaric acid, itaconic acid, and anhydrides, esters, amides or imides thereof on polyolefins or polyolefin copolymers.

6. The tubular film according to claim 1, characterized in that the first layer consists of a polyolefin and/or modified polyolefin with a melting point of 70-130°C, a density of 0.86-0.98 g/cm³ and a melt index of 0.2-15 g/10 min.
7. The tubular film according to any of the preceding claims, characterized in that the third layer consists of homopolymers of ethylene or propylene and/or copolymers of linear α -olefins having 2 to 8 C atoms.
8. The tubular film according to claim 7, characterized in that the polyolefins of the third layer preferably consist of linear low-density polyethylene, high-density polyethylene, polypropylene homopolymers, polypropylene block copolymers and polypropylene random copolymers.
9. The tubular film according to any of the preceding claims, characterized in that the second layer and the fourth layer consist of polyolefins and/or modified polyolefins.
10. The tubular film according to claim 9, characterized in that the polyolefins are homopolymers of ethylene or propylene and/or copolymers of linear α -olefins having 2 to 8 C atoms.
11. The tubular film according to claim 9, characterized in that the modified polyolefins are copolymers of ethylene or propylene and optionally further linear α -olefins having 3 to 8 C atoms with α,β -unsaturated carboxylic acids, preferably acrylic acid, methacrylic acid and/or metal salts thereof and/or alkyl esters thereof, and/or graft copolymers of α,β -unsaturated dicarboxylic acids, preferably maleic acid, fumaric acid, itaconic acid, or anhydrides, esters, amides or imides thereof on polyolefins or polyolefin copolymers.
12. The tubular film according to claim 1, characterized in that the layer or one of the layers following the first four layers consists of polyvinylidene copolymer constituted of vinylidene chloride and vinyl chloride and/or methacrylate monomers, the proportion of vinylidene chloride being at least 50%.

13. The tubular film according to claim 1, characterized in that the layer or one of the layers following the first four layers consists of a homopolyamide and/or copolyamide or mixtures of such polyamides which are produced from monomers selected from the group of caprolactam, laurilactam, ω -aminoundecanoic acid, adipic acid, azelaic acid, sebacic acid, decanedicarboxylic acid, dodecanedicarboxylic acid, terephthalic acid, isophthalic acid, tetramethylenediamine, pentamethylenediamine, hexamethylenediamine, octamethylenediamine, and xylylenediamine.
14. The tubular film according to claim 1, characterized in that the layer or one of the layers following the first four layers consists of ethylene-vinyl alcohol copolymer, characterized in that the proportion of ethylene is between 27 and 48 mole-%, preferably between 34 and 48 mole-%.
15. The tubular film according to claim 1, characterized in that the layer or one of the layers following the first four layers consists of blends of ethylene-vinyl alcohol copolymer according to claim 14 and polyamide according to claim 13.
16. The tubular film according to claim 1, characterized in that the layer or one of the layers following the first four layers consists of a polyolefin and/or a modified polyolefin or blends of the above polymers with each other.
17. The tubular film according to claim 16, characterized in that the polyolefins are homopolymers of ethylene or propylene and/or copolymers of linear α -olefins having 2 to 8 C atoms.
18. The tubular film according to claim 16, characterized in that the modified polyolefins are copolymers of ethylene or propylene and optionally further linear α -olefins having 3 to 8 C atoms with α,β -unsaturated carboxylic acids, preferably acrylic acid, methacrylic acid and/or metal salts thereof and/or alkyl esters thereof, and/or graft copolymers of α,β -unsaturated dicarboxylic acids, preferably maleic acid, fumaric acid, itaconic acid, and anhydrides, esters, amides or imides thereof on polyolefins or polyolefin copolymers.

19. The tubular film according to any of the preceding claims, characterized in that the tubular film has been subjected to coextrusion and biaxial stretching.
20. The tubular film according to any of the preceding claims, characterized in that the tubular film has been subjected to coextrusion, biaxial stretching and subsequent heat-setting.
21. The tubular film according to any of the preceding claims, characterized in that the tubular film has a wall thickness of from 30 to 120 μm , preferably from 40 to 100 μm .
22. Use of the tubular film according to any of claims 1 to 21 for packaging and wrapping meat, meat with bones, or pasty foodstuffs.
23. A bag, characterized in that said bag is produced from a tubular film according to any of claims 1 to 21 by welding or sealing the inner layer on itself.
24. Use of the bag produced according to claim 23 for packaging and wrapping meat, meat with bones, or pasty foodstuffs.